

## NOTES ON ACACIA, CHIEFLY FROM QUEENSLAND, III

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### SUMMARY

*Acacia brachycarpa*, *A. cretata*, *A. ensifolia* and *A. saxicola* are new species. *A. hubbardiana* is a new name for *A. plagiophylla* F. Muell. non Spreng. *A. undulifolia* A. Cunn. ex G. Don is a synonym of *A. uncinata* Lindl., and *A. holosericea* A. Cunn. ex Benth. var. *pubescens* F. Muell. of *A. pellita* O. Schwarz. Pods of *A. orites* Pedley are described. *A. binervata* DC., *A. brachybotrya* Benth., *A. dawsonii* R. T. Bak., *A. echinula* DC., *A. nilotica* (L.) Del. subsp. *indica* (Benth.) Brenan, *A. pilligaensis* Maid., *A. ramulosa* W. V. Fitzg., *A. rigens* A. Cunn. ex G. Don and *A. sphaerogemma* Maid. & Blakely are recorded from Queensland.

Previous papers of this series on the taxonomy and distribution of species of *Acacia* have been published in Proc. Roy. Soc. Qd 74: 53–59 (1964) and 75: 29–35 (1964).

**Acacia cretata** Pedley; species nova affinis *A. cunninghamii* Hook. Typus: *Story & Yapp* 182 (Holotypus: BRI.051963)

Arbor usque ad 6 m alta cortice albido-cano fere laevi deinde aspero. Ramuli angulatissimi pruinosi. Phyllodia glabra glaucave, leviter falcata, obtusa vel mucronata, 7–12 cm longa, 1.0–3.5 cm lata, 2.5–7.5-plo longiora quam lata, ad basin glandula instructa, in petiolo crasso 2–3 mm longo abrupte contracta; nervi longitudinales 2–3 validi basin versus fere liberi, alii tenues late separati anastomosantes. Spicae usque ad 10 cm longae aliquantum sparsiflorae, in axillis superis geminatae, pedunculis ca 1–2 cm longis et rhachibus pruinosis instructae. Flores glabri 5-meri; calyx 0.6 mm longus, truncatus vel brevissime lobatus; corolla profunde lobata 1.6 mm longa; ovarium glabrum. Legumen lineare usque ad 10 cm longum seminibus longitudinalibus maturis non visis.

QUEENSLAND.—LEICHHARDT DISTRICT: Between Emerald and Rockhampton, Aug. 1960, *Henderson & Henderson*; 9 miles E. of Comet, Sept. 1961, *Lazarides & Story* 67; ca 25 miles NE. of Capella, July 1962, *Story & Yapp* 182; 18 miles NE. of Capella, Sept. 1964, *Adams* 1293. MITCHELL DISTRICT: Jericho, Aug. 1946, *Clemens*.

This has previously been included with a complex of taxa under the name *Acacia cunninghamii* Hook. but it can be distinguished from the other taxa by its pruinose branchlets and phyllodes, its phyllodes contracted abruptly into short stout petioles, and all parts of its flowers quite glabrous.

***Acacia ensifolia*** Pedley; species nova affinis *A. beckleri* Tindale phyllodiis longioribus plus attenuatis corolla brevior non hirsuta differt. Typus: *Everist* 5657 (Holotypus BRI.065006).

Arbor usque ad 9 m alta. Cortex canus sulcatus deinde fuscus squamis asperis. Ramuli angulati glabri paullo glauci flavo-virides. Phyllodia coriacea prominenter uninervia, nervis marginalibus costae similibus, recta vel leviter falcata, lineari-lanceolata in apicem acutum sensim attenuata, 15–26 cm longa, 5–8 mm lata, 25–45-plo longiora quam lata, petiolo 2–4 mm longo glandula ad basin et interdum ad marginem superiorem 1 vel 2 glandulis instructa. Capitula 50–60-flora singula in pedunculis crassis glaucis usque ad 15 mm longis vel interdum in racemis usque ad 5 cm longis disposita. Flores 5-meri obconici; bractea peltata, 1.6 mm longa, ejus lamina disciformis valde pubescens et stipes gracilis glaber vel parce hirsutus; calyx 1.6 mm longus fulvus, e tubo glabro 1.3 mm longo et lobis obtusis dense ciliatis constructus; corolla 2.5 mm longa, tubo glabro calyce aequilongo, lobis  $\pm$  acutis minute papillois vel pubescentis; stamina numerosa pistillo aequilonga; ovarium glabrum breve stipitatum 1 mm longum; stylus glaber 2 mm longus. Legumina stipitata, linearia, glauca, 8–10 cm longa, 1.0–1.3 cm lata. Semina in legumine longitudinaliter disposita, funiculo filiformi apicem versus semel plicato, sed matura haud visa.

QUEENSLAND.—WARREGO DISTRICT: “Whynot” between Quilpie and Thargomindah, in gravelly clay with scattered gidyea, not common, Nov. 1957, *Everist* 5657; 23 miles W. of Quilpie, in pebbly red-brown loam with box, coolibah and some mulga, Oct. 1948, *Everist* 3559; 75 miles from Charleville on Quilpie road, broken ridges and gullies, pebbly red-brown loam to clay loam with *Eucalyptus thozetiana*, Sept. 1963, *Everist* 7521.

There may be some question as to whether *A. ensifolia* and *A. beckleri* are specifically distinct, but when the morphological differences are considered with the difference in ranges of the two, then it seems that specific distinction is warranted.

***Acacia hubbardiana*** Pedley; nomen novum.

*A. plagiophylla* F. Muell. J. Linn. Soc. 3: 131 (1859), Wing’s South. Sci. Rec. 2: 149 (1882), Icon. Aust. Sp. Acac. 4: 5 (1887); non Spreng. Syst. 3: 135 (1826). Type: Ad flumen Brisbane, *Hill & Mueller* (MEL).

QUEENSLAND.—WIDE BAY DISTRICT: Bundaberg, *Keys*; between Howard and Traverston, Oct. 1929, *White* 6354; Burrum Heads, Aug. 1962, *Gittins* 619; Goodwood, June 1915, *Bick*; Coondoo Creek, NW. of Mt. Coondoo, Dec. 1919, *Francis*; Lake Weyba, Aug. 1914, *White*. MORETON DISTRICT: Mt. Coolum, Apr. 1945, *Clemens*; Beerwah, May 1918, *White*; between Beerwah and Landsborough, June 1930, *Hubbard* 3100; Caloundra, *Kenny*; Sept. 1909, *White*; Aug. 1933, *Everist* 432, 438; May 1957, *Wilson* 678; Maroochy, Oct. 1874, *Bailey*; northern end of Moreton Bay, July 1918, *Parker*; Glasshouse Mtns., *Bailey*; July 1930, *Hubbard* 3360;



Sept. 1930, *Hubbard* 4127; May 1935, *Goy*; Oct. 1935, *Goy* 72; and July 1939, *Goy & Smith* 691; Lawnton, Aug. 1942, *White* 11804; Redcliffe Road about 19 miles from Brisbane, July 1928, *Bick*.

Bentham in *Fl. Austr.* 2: 356 (1864) stated that *A. plagiophylla* F. Muell. belonged probably to one of the varieties of *A. undulifolia* A. Cunn. ex G. Don, and at the same time he described *A. undulifolia* var. *humilis* citing "N.W. interior of N.S. Wales, *Fraser*; also the Brisbane specimens from F. Mueller and Leichhardt". Mueller (1882) redescribed *A. plagiophylla* with the citation "Near Durval [Toorbul] and Biroa [Mt. Beerwah, one of the Glasshouse Mountains], Dr. Leichhardt; vicinity of the Brisbane River, F. v. M. and W. Hill; Maroschie (*sic*), Bailey".

The Brisbane specimens of Mueller and Leichhardt cited by Bentham under *A. undulifolia* var. *humilis* are probably the same as those cited by Mueller under *A. plagiophylla*, but, as *A. hubbardiana* is confined to coastal lowlands and mountain peaks between Bundaberg and Brisbane, it is unlikely that *Fraser's* specimen from the interior of New South Wales belongs. Mueller's omission of this from specimens cited under *A. plagiophylla* may indicate that he held the same view.

*A. undulifolia* var. *humilis* is probably based therefore on discordant elements, but it seems desirable to delay choosing a lectotype until there is a comprehensive review of *A. undulifolia* (= *A. uncinata*, see below).

*A. hubbardiana* is not closely related to *A. undulifolia* and was correctly placed by Mueller in the series *Triangulares*.

The species is named to honour Dr. C. E. Hubbard, Royal Botanic Gardens, Kew, who collected extensively in Queensland.

**Acacia orites** Pedley, *Proc. Roy. Soc. Qd* 75: 32 (1964).

Pods linear, 8–11 cm long, 4 mm broad; valves glabrous, somewhat coriaceous, brown with pale marginal nerves, raised above the seeds. Seeds longitudinal, black, 3.5–4 mm long, 1.7–2 mm broad with a rather thick cream funicle folded once, forming an aril at the base of the seed.

Additional specimen examined: Moreton District: Springbrook, *Morley*, received Jan. 1966, fruiting in Oct.–Nov.

Fruiting material was not available when the species was described.

**Acacia pellita** O. Schwarz, *Repert. Spec. Nov.* 24: 86 (1927). Isotype: Northern Territory: Port Darwin, 14 miles E., banks of Milners Creek, *Bleeser* 479 (MEL).

*A. holosericea* A. Cunn. ex Benth. var. *pubescens* F. Muell. *J. Linn. Soc.* 3: 147 (1859); Pedley, *Proc. Roy. Soc. Qd* 74: 58 (1964); *syn. nov.* Holotype: banks of the Victoria River, Nov. 1853, *Mueller* (MEL).

Examination of type material has revealed that *A. pellita* and *A. holosericea* var. *pubescens* represent the same taxon which is sufficiently distinct from *A. holosericea* to be worthy of specific rank.

A locality additional to those previously recorded is: Northern Territory: Edith River, near upper falls, Sept. 1965, *Siebel & Hansen in N.T. Timber & Forestry Bur. No. 20.*

#### **Acacia ulicifolia** and allied species in Queensland.

Three species, two of them undescribed, have been confused with *A. ulicifolia* in Queensland. The following key may be used to distinguish the four.

Flower heads with bracts projecting beyond the flowerbuds; peduncles stout.

Phyllodes only slightly vertically flattened, usually less than 1.5 mm broad; bracts with mucro 1-1.2 mm long *A. echinula*

Phyllodes vertically flattened, more than 1.5 mm broad; bracts with peltate lamina and mucro 0.4-0.6 mm long *A. saxicola*

Flower heads with bracts not projecting beyond flowerbuds; peduncles slender.

Peduncles 1-2 mm long, much shorter than the phyllodes; pods 1-3-seeded, up to 2 cm long *A. brachycarpa*

Peduncles at least 8 mm long, about as long as the phyllodes; pods usually with 6 or more seeds, up to 5 cm long *A. ulicifolia*

*A. brownii*, a species also closely related to *A. ulicifolia*, is not known to occur in Queensland.

#### **Acacia echinula** DC. Prod. 2: 449 (1825).

A shrub to 1.5 m tall with somewhat tomentose branchlets; phyllodes spreading horizontally, acerose, 5-10 mm long, 0.5-1.2 mm broad,  $\pm$  terete when fresh but with a prominent rib on each side when dry; heads 30-40-flowered on solitary peduncles 6-16 mm long; bracts peltate, 2.2-2.4 mm long, the lamina with a point 1.0-1.2 mm long projecting beyond the bud.

QUEENSLAND.—MORETON DISTRICT: Crows Nest, Nov. 1919, *Kenny*.

The species is widespread in New South Wales but this is the first record of its occurrence in Queensland.

**Acacia saxicola** Pedley; species nova affinis *A. echinulae* DC. phyllodiis latioribus et bracteis brevioribus mucronibus minus elongatis differt. Typus: *Pedley* 2140 (Holotypus: BRI.065047).

Frutex ramosissimus usque ad 1.5 m altus. Ramuli teretes parce strigosi demum glabri. Phyllodia glabra, punctulata,  $\pm$  sessilia, plana,  $\pm$  anguste triangulares in cuspidem ca 1.5 mm longum rubicundum sensim attenuata, prominenter uninervia nervis marginalibus costae similibus, 7.5-14 mm longa, 1.7-3.0 mm lata, 2.7-6.7-plo longiora quam lata, glandula inconspicua in margine dorsali partis latissimae phyllodii paullum supra basin instructa. Stipulae persistentes setaceae 2-3 mm longae. Capitula 40-50-flora in pedunculis axillaribus



glabris phyllodiis aequilongis sita. Flores 5-meri; bractea stipitata e stipite 1.0–1.2 mm longo, lamina fimbriata 0.8 mm diam. mucrone obliquo 0.6 mm longo in alabastro exserto; calyx e sepalis liberis anguste spathulatis 1.2–1.4 mm longis constructus, in tertia summa parte pubescens, basem versus pilis longis paucis ornatus; lobi corollae 2 mm longi  $\pm$  liberi ovati glabri; stamina 4 mm longa; ovarium glabrum. Legumen glabrum. Semina in legumine longitudinaliter disposita depresso-globosa, 4 mm longa, 3.2 mm lata, exarillata funiculo filiformi.

QUEENSLAND.—MORETON DISTRICT: Mt. Maroon, on rocky slopes on southern side, alt. ca 2,800 ft., Jan. 1962, *Everist* 7050; Mt. Maroon, on summit of plateau, abundant in pockets of soil in rock crevices, Jan. 1962, *Everist* 7040; Mt. Maroon, amongst boulders, southern slope of north peak, alt. above 3,000 ft., March 1962, *Everist* 7075; Mt. Maroon, in low heath at top of north-eastern gorge, alt. 2,900 ft., June 1966, *Pedley* 2140.

**Acacia brachycarpa** Pedley; species nova affinis *A. ulicifoliae* (Salisb.) Court pedunculis brevibus capitulis paucifloribus et leguminis brevioribus differt. Typus: *Speck* 1852 (Holotypus: BRI.059777).

Frutex ramosissimus usque ad 2 m altus. Ramuli indumento pilorum alborum rigidorum 0.1–0.4 mm longorum ornati. Stipulae lineares acutae fulvae scariosae 0.7–1.0 mm longae. Phyllodia recta rigida acerosa pungentia, punctulata, 9–15 mm longa, 0.8–1.1 mm lata utrinque valide uninervia, glandula 1.5–2.5 mm supra basin praedita. Capitula 10–18-flora in pedunculis axillaribus glabris 1.3–2.0 mm longis (fructiferis 3–4 mm longis). Flores 5-meri; bractea peltata e stipite gracili glabro 0.3–0.4 mm longo, lamina oblique acuminata circiter 0.7 mm longa; sepala  $\pm$  libera, spathulata, acuta vel obtusa, 0.5–0.7 mm longa, 0.3–0.4 mm lata, in dimidio supero pubescentia vel ciliata; petala  $\pm$  libera, glabra, acuta 1.1–1.3 mm longa, 0.2–0.3 mm lata; stamina 2.5 mm longa; ovarium glabrum. Legumen oblongum 6–20 mm longum, 3 mm latum. Semina in legumine longitudinaliter disposita, oblonga, 3.5 mm longa, 2.0 mm lata, funiculo filiformi non plicato.

QUEENSLAND.—LEICHHARDT DISTRICT: Blackdown Tableland (149° E., 24° S.), Sept. 1959, *Johnson* 1135A, July 1965, *Gittins* 949; 21 miles SE. of "Bedourie" (ca 40 miles NW. of Taroom), Oct. 1963, *Speck* 1852; Carnarvon Creek, July 1949, *Althofer* 82. DARLING DOWNS DISTRICT: Stanthorpe, *Westacott*. MORETON DISTRICT: Crows Nest, June and Sept. 1924, *Brass* 20, Sept. 1920 and Aug. 1922, *Kenny*; 12 miles N. of Helidon, July 1966, *Ward*; Helidon-Ravensbourne area, Sept. 1963, *Hockings*.

*A. brachycarpa* occurs sporadically in south-eastern Queensland usually on sandstone. Its range is generally more inland than that of *A. ulicifolia* with which, however it sometimes occurs, for example at Crows Nest and on the Blackdown Tableland. It flowers later in the year than *A. ulicifolia*, has deeper yellow flowers, and its pods and peduncles are always much shorter.

**Acacia ulicifolia** (Salisb.) Court, *Vict. Nat.* 73: 173 (1957).

A shrub to 2 m tall, occasionally prostrate with somewhat tomentose branchlets; phyllodes spreading, acerosae (6–) 7.5–11 mm long, 0.6–1.3 (–1.6) mm broad, flattened with a prominent rib on each side; heads 20–35-flowered on solitary peduncles 8–15 mm long; bracts not peltate, the lamina oval produced into a point 0.2–0.4, rarely 0.6 mm long not projecting beyond the bud.

QUEENSLAND.—NORTH KENNEDY DISTRICT: SFR 438, Tumoulin near Ravenshoe, Mar. 1961, *Dansie* 2032 in *QFD.62/149*. LEICHHARDT DISTRICT: Blackdown Tableland (149° E., 24° S.), Sept. 1959, *Johnson* 1118, and July 1965, *Gittins*. WIDE BAY DISTRICT: Fraser I., Aug. 1918, *Petrie* 103, Oct. 1930, *Hubbard* 4512, and Oct. 1921, *White* 1333; Tin Can Bay, Sept. 1943, *White* 12251; ca 24 miles a little N. of E. of Gympie, May 1964, *Smith* 12123; between Howard and Traverston, Oct. 1929, *White* 6381; Noosa Downs, Tewantin district, May 1957, *Wilson* 653. BURNETT DISTRICT: Mount Perry, *Keys*. MORETON DISTRICT: Yarraman, Sept. 1924, *Cameron* Y42; Crows Nest, Sept. 1920, *Kenny*; Mt. Byron, ca 20 miles ENE. of Esk, Nov. 1963, *Everist* 7609; Mt. Edwards, Apr. 1934, *Everist* 605; Moreton I., Sept. 1908, *Field Naturalists Excur.*; Moreton I., E. of Tangalooma, Oct. 1964, *McKee* 11636; Stradbroke I., Apr. 1915, *Bick*, Oct. 1916, *Bick*, Apr. 1930, *Hubbard* 2263, and Sept. 1935, *Goy* 40; Chermside near Brisbane, Aug. 1916, *White*; Kedron Brook near Brisbane, July 1874, *Bailey*; Brisbane River, 1863-1865, *Dietrich*; between Coopers Plains and Sunnybank, near Brisbane, June 1930, *Hubbard* 3050; Sunnybank, Aug. 1911, *White*; Mt. Maroon, June 1966, *Pedley* 2146; Coombabah near Southport, May 1957, *Wilson* 627; Tugun, Sept. 1930, *White* 7096. DARLING DOWNS DISTRICT: Between Warwick and Stanthorpe, Sept. 1949, *Burns*; Dalveen, Nov. 1946, *Everist & Webb* 1287; Jolly's Falls, ca 10 miles N. of Stanthorpe, Oct. 1962, *Hockings*; Passchendaele, *Epps* in *QFD.56/278*; Amiens, 10 miles NW. of Stanthorpe, Oct. 1963, *Pedley* 1492, and *Harslett* in *Pedley* 1509; Stanthorpe, Aug. 1930, *Westacott*; Severn, *Hartmann*; Thulimbah, Sept. 1929, *Thomson*; Eukey-Mt. Tully road, Sept. 1956, *Shea* S21; 8 miles E. of Wyberba, Oct. 1958, *Pedley* 315; Wallangarra, Sept. 1919, *Ball* and Apr. 1956, *Constable* in *NSW.37304*.

There is some variation in peduncle length and phyllode size. Specimens from the wallum (coastal heath) tend to have shorter, broader phyllodes than those from sub-coastal districts, but there is no clear-cut division. *Wilson* 627 and 653 have particularly short broad phyllodes.

***Acacia uncinata* Lindl. Bot. Reg. 15: t. 1332 (1830).**

*A. undulifolia* [Lodd. Bot. Cab. 16: t. 1544 (1829), *nomen nudum*; Loud. Hort. Brit. 407 (1830), *nomen nudum*] A. Cunn. ex G. Don, Gen. Syst. 2: 404 (1832); *syn. nov.*

QUEENSLAND.—DARLING DOWNS DISTRICT: Barakula, Aug. 1956, *May*; Barakula, SFR 302 *Malcolm*, Aug. 1964, *Hawkins*; Goombungee, June 1959, *Ward*; 6 miles S. of Warwick, Nov. 1946, *Everist & Webb* 1265; Passchendaele, 10 miles NW. of Stanthorpe, *Fliteroft*; Bapaume, NW. of Stanthorpe, Sept. and Oct. 1956, *Shea* S26; Messines, NW. of Stanthorpe, Jan. 1931, *Greener*; Oct. 1963, *Pedley* 1520; Amiens, 10 miles WNW. of Stanthorpe, Oct. 1963, *Harslett* in *Pedley* 1515; Wallangarra, Sept. 1919, *Ball*.

*A. undulifolia* was validly published in 1832, two years after the publication of *A. uncinata*. Names previously published are *nomina nuda*.

No attempt has been made to recognise infra-specific taxa as a knowledge of the species throughout its range is desirable before this is attempted.

## NEW RECORDS FOR QUEENSLAND

***Acacia binervata* DC.**

MORETON DISTRICT: Lower Springbrook, 20 miles SW. of Southport, Oct. 1963, *Hockings*.

***Acacia brachybotrya* Benth.**

GREGORY SOUTH DISTRICT: Poepel Corner (138° E., 26° S.), Sept. 1966, *Boylard* 254.



**Acacia dawsonii** R.T. Bak.

DARLING DOWNS DISTRICT: Amiens, ca. 10 miles WNW. of Stanthorpe, Sep. 1966, *Ward* 287.

**Acacia nilotica** (L.) Del. subsp. **indica** (Benth.) Brenan

*A. arabica* (Lam.) Willd. var. *indica* Benth.

BURKE DISTRICT: Hughenden, Jan. and Sept. 1959, *Ward*; Richmond, June 1959, *Richmond Shire Council*; Julia Creek, July 1959, *Sillar*. NORTH KENNEDY DISTRICT: Edgumbe Bay, *Michael* 1226; Bowen, Feb. 1923, *White*, Jan. 1944, *Hancock*, and Aug. 1963, *Cottam*. MITCHELL DISTRICT: Barcaldine, April 1919, *White* and Nov. 1943, *White* 12355 (cultivated). SOUTH KENNEDY DISTRICT: Mackay, in 1914, *Jones* (cultivated); 10 miles NE. of Alpha, April 1961, *Johnson* 2169. LEICHHARDT DISTRICT: 14 miles S. of Clermont, May 1964, *Wetherall* 87. PORT CURTIS DISTRICT: Rockhampton, May and Oct. 1925, *Court*, and Jan. 1948, *Michael* 3102. WIDE BAY DISTRICT: Maryborough, Feb. 1964 and Nov. 1965, *Harvey*.

*A. nilotica* subsp. *indica* is cultivated in Queensland, and is naturalized in some places, notably Hughenden, Winton, Longreach, Barcaldine, Aramac, Bowen and Rockhampton. It was first noted as being naturalized at Rockhampton in 1925.

Leaves and pods are palatable to stock and are a valuable source of protein. Young plants however form thickets and impede the movement of livestock and interfere with the flow of streams. In 1957 it was declared a noxious plant throughout Queensland under "The Stock Routes and Rural Lands Protection Acts".

**Acacia pilligaensis** Maid.

DARLING DOWNS DISTRICT: Weranga, ca 10 miles E. of Tara, May 1961, *Smith* 11345, and Sept. 1966, *Price*; cultivated at Glenmorgan by D. M. Gordon from seeds collected in N.S.W., Sept. 1961, *Pedley* 856.

A specimen (Mitchell District: Jericho, June 1913, *Boorman*) referred by Maiden (J. & Proc. Roy. Soc. N.S.W. 53: 189 (1920)) with considerable doubt to *A. pilligaensis* differs from the specimens cited in having glabrous branchlets and more spatulate phyllodes. Nothing resembling Boorman's specimen has been collected since in the Jericho area.

**Acacia ramulosa** W.V. Fitzg.

GREGORY SOUTH DISTRICT: 90 miles WNW. of Birdsville, on flats between sandhills, Sept. 1966, *Boylard* 292.

**Acacia rigens** A. Cunn. ex G. Don

WARREGO DISTRICT: "Gilruth Plains", near Cunnamulla, July 1966, *Brooker*.

**Acacia sphaerogemma** Maid. & Blakely

BURKE DISTRICT: "Highland Plains", 100 miles N. of Camooweal, May 1966, *Pedley* 2045; "Adel's Grove", 90 miles SW. of Burketown, April 1950, *de Lestang* 462.